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ABSTRACT

The reauthorized Elementary and Secondary Education Act, commonly refereed to as the No Child Left Behind Act (NCLB), require states to demonstrate that all public schools make adequate yearly progress (AYP) with respect to student academic achievement. The measurement unit is schools and the following four subgroups within each school: economically disadvantaged students; students from major racial and ethnic groups; students with disabilities; and students with limited English proficiency. If the number of students in a subgroup is of a size that would reveal the identity of the students or the subgroup is not of sufficient size to yield statistically reliable results, the AYP of that subgroup need not be reported separately. This report summarizes information from 37 state education agencies (SEAs) on the minimum subgroup size for reporting test results to guarantee confidentiality and yield statistically reliable information. Results indicate at least 30 SEAs have policy or practice in place related to the minimum number of students required in a subgroup to conceal individual student identity. In comparison, only 14 responding SEAs have policy or practice related to the minimum number to yield statistically reliable results for reporting and 12 for measuring AYP. (Author/CR)

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Subgroup Size-Confidentially and Statistical Reliability Quick Turn Around

By
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December 2002

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Quick Turn Around

Project FORUM

QTA – A brief analysis of a critical issue in special education

Subgroup Size – Confidentiality and Statistical Reliability

December 2002

by Joy Markowitz

Background

The reauthorized Elementary and Secondary Education Act (ESEA), commonly referred to as the No Child Left Behind Act (NCLB), and its final implementing regulations[1] require states to demonstrate that all public schools make "adequate yearly progress" (AYP) with respect to student academic achievement. The measurement unit is schools and the following four subgroups within each school: (1) economically disadvantaged students; (2) students from major racial and ethnic groups; (3) students with disabilities; and (4) students with limited English proficiency.

If the number of students in a subgroup is of a size that would reveal the identity of the students in that subgroup or the subgroup is not of sufficient size to yield statistically reliable results, the AYP of that subgroup need not be reported separately, although all students must participate in the statewide assessment program. If the number of students in a subgroup will not yield statistically reliable results at the school level, the state must include those students in disaggregations at the next higher level (e.g., local education agency [LEA] or state level).

Specifically, NCLB stipulates that the:

...disaggregation of the data under subclause (II) shall not be required in a case in which the number of students in a category is insufficient to yield statistically reliable information or the results would reveal personally identifiable information about an individual student...
[20 USC 6311 §1111(b)(2)(C)(v)(II)]

The absence of specifics in the law leaves it to each state to determine when a subgroup is too small to guarantee confidentiality or yield statistically reliable information.[2]

This *Quick-Turn-Around* summarizes information from 37 state education agencies (SEAs) on the minimum subgroup size for reporting test results to guarantee confidentiality and yield statistically reliable information. SEAs were queried on subgroup size in regard to "adequate yearly progress" as described in NCLB.

Project FORUM Survey

Project FORUM at the National Association of State Directors of Special Education

[1] Final regulations published December 2, 2002 at 67 Fed. Reg. 71710.

[2] The discussion section of the final regulations states that the Secretary will review and approve state definitions of statistically-reliable information and may offer non-regulatory guidance, and that the U.S. Department of Education will issue non-regulatory guidance to provide examples for handling AYP for small districts and single school LEAs.

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(NASDSE) developed a survey to query SEAs on their policies related to minimum subgroup size, concerns and issues on this topic and information they need to assist with policy development. The survey information was collected September through November 2002 as part of Project FORUM's Cooperative Agreement with the U.S. Department of Education's Office of Special Education Programs (OSEP).

Sample

The 37 responding SEAs included 35 states and two non-state jurisdictions. Although not every SEA responded to the FORUM survey, respondents included six of the seven states with the largest populations and nine of the 12 states with the smallest populations. Each of OSEP's seven regions was represented by at least five SEAs.

Minimum for Confidentiality

Thirty of the 37 responding SEAs reported that they have developed policy, proposed policy or have a practice related to the minimum number of students required in a subgroup to conceal individual student identity. The required minimum number ranges from three to 40, with 10 the most common response (15 SEAs).

One of the 15 SEAs that requires a minimum of 10 students will not report test results if all of the students in that subgroup score at the same performance level because in that event, student identity cannot be concealed. Another SEA that requires 10 students indicated that 10 is the minimum number for the school level and 20 is the minimum number for the district level. One state that set 15 as its minimum number specified that it has a lower minimum number—five—for charter schools.

Respondents from six of the 30 SEAs specified that the minimum number reflects practice or proposed policy, not final policy. See Table 1 for a summary of policy, proposed policy and practice on this issue.

One SEA (not part of the 30) reported that is has no policy regarding minimum number of students to conceal individual students identity related to NCLB and AYP, but does have existing policy for two state tests—10 students for one test and 20 for another test.

Table 1
Minimum Number to Conceal Individual Student Identity (N=37)

Minimum Number in Subgroup	No. of SEAs with Policy, Proposed Policy or Practice
3	1
5	7
6	2
8	1
10	15
11	1
15	1
30	1
40	1
No policy or practice	7

Minimum for Statistical Reliability

Fourteen of the 37 responding SEAs provided information on policy, proposed policy or practice related to the minimum number of students required to yield statistically reliable results for reporting purposes. The required minimum number ranges from 5 to 75, with 30 the most common response (4 SEAs). One of these four SEAs set the minimum number at 30 or five percent of the total number of students in that subgroup who should be taking the test—whichever number is greater. One SEA indicated that 10 is the minimum number for school-level reporting and 20 is

the minimum number for reporting at the district level. Another state that requires a minimum of 15 for school-level reporting set five as the minimum number for charter schools.

Four of the 14 SEAs described in the paragraph above set a higher minimum number to yield statistically reliable results for measuring subgroup progress over time (i.e., AYP) than for reporting subgroup test results at one point in time (e.g., 50 and 20; 42 and 6, 40 and 5; and 15 and 30) and one SEA uses confidence intervals to evaluate schools' performance relative to statewide performance goals (measuring AYP).

Four of the 14 respondents specified that the minimum number reflects practice or proposed policy, not final policy. See Tables 2 and 3 for a summary of state policy, proposed policy and practice on these issues.

Table 2
Minimum Number to Yield Statistically Reliable Results for Reporting Subgroup Test Results (N=37)

Minimum Number in Subgroup	No. of SEAs with Policy, Proposed Policy or Practice
5	2
6	1
10	3
15	1
20	1
30	4
40	1
75	1
No policy or practice	23

Table 3
Minimum Number to Yield Statistically Reliable Results for Measuring Subgroup AYP (N=37)

Minimum Number in Subgroup	No. of SEAs with Policy, Proposed Policy or Practice
10	2
30	4
40	2
42	1
50	1
75	1
Confidence intervals	1
No policy or practice	25

Concerns and Issues

SEA respondents raised a number of concerns and questions related to the topic of subgroup size, including the following:

- Is it valid to compare different groups of students year to year?
- Minimum numbers cannot ensure confidentiality in all cases.
- What is the appropriate "confidence band/interval" for measuring AYP?
- Confidentiality is a concern when a large percentage of a subgroup is not proficient.
- What are the most valid and reliable methods to determine which students are in the subgroup "economically disadvantaged?"
- There are actually two groups of students with disabilities—those served under the Individuals with Disabilities Education Act (IDEA) and those served under Section 504 of the Rehabilitation Act.
- There will be controversy on the margins of the minimum number.
- Should there be two subgroups of students with disabilities—those who take the standard assessment and those who take the alternate?

- Some schools are so small that AYP will never be measured for subgroups.
- Setting a minimum subgroup size may conflict with the public's demand/right to be informed about educational progress.

Future Policy Development

Seven of the responding SEAs noted that some part of their policy related to minimum subgroup size for reporting test results is not final. In addition, respondents from several SEAs with policies in place indicated that the required minimum numbers are likely to be reviewed and possibly revised in the near future.

In order to assist with policy development, SEAs reported the need for the following:

- information from other states [26 SEAs];
- statistical consultation [18 SEAs];
- input from stakeholders [10 SEAs]; and
- information from the U.S. Department of Education (e.g., National Center for Education Statistics) [5 SEAs].

Respondents from several SEAs noted that they are aware that the Council of Chief State School Officers (CCSSO) is convening a taskforce of experts on this issue and they are eager to see the report.

Concluding Remarks

At least 30 SEAs have policy or practice in place related to the minimum number of students required in a subgroup to conceal individual student identity. In comparison, only 14 responding SEAs have policy or practice related to the minimum number to yield statistically reliable results for reporting and 12 for measuring AYP.

The seven SEAs that responded to the Project FORUM survey, but do not have policy or practice in this area expressed a need for information from other states. Based on the questions and concerns voiced to NASDSE staff and information gathered for this Project FORUM survey, additional guidance from the Department of Education is needed in this area.

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